

## Three Additional Species of Brentidae (Coleoptera, Curculionoidea) to the Fauna of Japan

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**Abstract** *Cyphagogus boninensis* sp. nov. is described from Hahajima Is. of the Ogasawara Isls. *Mesoderes latecostatus* (KLEINE, 1916) and *Prophthalmus wichmanni* KLEINE, 1916, are recorded from Japan for the first time.

The family Brentidae of Japan comprises 27 species on record (KOJIMA & MORIMOTO, 2004) and three species are newly added to its fauna in this paper. *Cyphagogus boninensis* sp. nov. is described from Hahajima Is. in the Ogasawara Isls. *Mesoderes latecostatus* (KLEINE, 1916) has been known by a female (holotype) from Taiwan, newly recorded from Mt. Inaodake, Kagoshima Pref. and redescribed on both sexes. *Prophthalmus wichmanni* KLEINE, 1916, is also recorded from Ishigakijima Is. of the Ryukyus for the first time.

To the late Dr. Michio CHÛJÔ, this paper is dedicated in token of respect to the memory of his great contribution to the taxonomy of the Coleoptera. Dr. CHÛJÔ had a wide range of interest in the Coleoptera including weevils as he compiled a list of the Brentidae and Anthribidae of Japan in 1939 with Y. MIWA, and published 15 papers on weevils after 1959.

We would like to express our thanks to the late Dr. Kintaro BABA, and Messrs. Hiroshi MAKIHARA and Isao MATOBA for their kind help on specimens.

### *Cyphagogus boninensis* sp. nov.

(Figs. 1–3, 16)

Female. Pale yellowish brown, with a pair of dark patches in front of middle on elytra, basal stalks of femora brownish.

Head elongate, 5/4 times as long from anterior margin of eye to constriction as

maximum width behind eyes, 0.8 times as wide at constriction as maximum width behind eyes, weakly narrowed to constriction in a faint curve at sides, vertex weakly convex, with sparse fine punctures; eyes ovate, convex; temple twice as long as long diameter of eye in lateral view, underside of head with the punctures a little larger and denser than those on dorsal side, with a fine median gular line; rostrum almost as long as head behind anterior margin of eye to constriction, metarostrum as wide as base of head, slightly narrowing to mesorostrum from eyes, with finer and sparser punctures than those on head, mesorostrum enlarged laterally above antennal sockets, prorostrum strongly dilated, 1.8 times as wide as long, almost flat, as finely punctate as on metarostrum on dorsum and a little denser anteriorly, weakly and broadly produced anteriorly on each side of the middle in an arc at anterior margin; underside of rostrum with a transverse sulcus connecting antennal sockets, flat in front of the sulcus, densely with fine punctures and yellowish grey short setae. Head and rostrum in profile thickest at head behind eye, evenly narrowing apically in a weak curve on dorsal contour, scarcely curved on ventral contour in lateral aspect. Antennae robust, successively dilated apically from 2nd to 9th, three apical segments forming loose weak club, with proportions in length (width) from base 10 (8.5):9 (7.2):6 (7.2):5 (8):5 (8):6 (8):5.5 (8.6):6 (9):9 (19):9 (10):18 (18).

Prothorax elongate ( $L/W=100/55$ ), widest at a third from base, almost half as wide at subapical constriction as the maximum width, with conus 0.8 times as wide as the narrowest width, disc with dense large punctures, interstices between punctures much narrower than their diameter, microsculptured, punctures obsolete on declivitous part of conus behind subapical constriction, weaker at sides, sparse and no microsculpture on the underside and on the femoral depression at sides, hind margin rebordered, with rounded corners.

Elytra slender ( $L/W=100/35$ ), subparallel-sided from base to middle, then weakly becoming narrowed to apex in a curve and conjointly rounded at apex; striae with large punctures; intervals microsculptured and a little mat, 2nd interval attenuate from base to a third, then linear to the level of hind coxa, gradually divergent again and as wide as 1st interval on declivity, odd-numbered intervals slightly stronger than even-numbered ones, with a row of suberect short setae, which are widely spaced and rounded at apex.

Hind femora slightly curved between base and the middle, then strongly swollen to apex; fore tibiae obtuse triangularly dilated internally from base and angulate at the middle, with sharp tooth at angle directing interno-anteriorly, fore tarsal segments in length (width) from base as 7 (7):5 (7):7 (8):16 (5); hind tarsal segments in length (width) from base as 16 (8):7 (7.5):9 (7.2):19 (6), 1st segment circular in cross-section.

Prosternum smooth, sparsely with minute punctures, finely coriaceous when viewed under high magnification, metasternum and venter sparsely with fine punctures in the middle, with shallow and a little larger punctures at sides, as coriaceous as prosternum, 5th ventrite with a few short setae at apex.

Length: 4.3 mm.

Holotype: ♀ (Type No. 3197, Kyushu Univ.), Kohmoriyama, Hahajima, Ogasawara Isls., 6–VII–1995, H. MAKIHARA.

*Distribution.* Japan (Ogasawara Isls.: Hahajima Is.).

*Etymology.* This species is named after the locality.

*Notes.* This specimen was attracted to a cerambycid attractant trap set 1 m above ground, but no additional specimen has been captured in spite of repeated setting of the same traps in several parts on this island for three years.

When tested in the key to species of DAMOISEAU (1989), this species goes down close to *C. crassitarsus* and *C. samoanus*, but is very distinctive by its slender head and coloration (ref. DAMOISEAU, 1964, p. 472, figs. 19, 20, 21 for *C. crassitarsus*, and KLEINE, 1928, p. 157, fig. 1 for *C. samoanus*).

### *Mesoderes latecostatus* (KLEINE, 1916)

(Figs. 4–15, 17)

*Isomorphus latecostatus* KLEINE, 1916, 58 (Formosa, Hoozan, 1 ♀); 1927, 14; 1937, 122; 1938, 46. — KANO, 1930, 152 (Formosa). — MIWA & CHÛJÔ, 1939, 2 (Formosa).

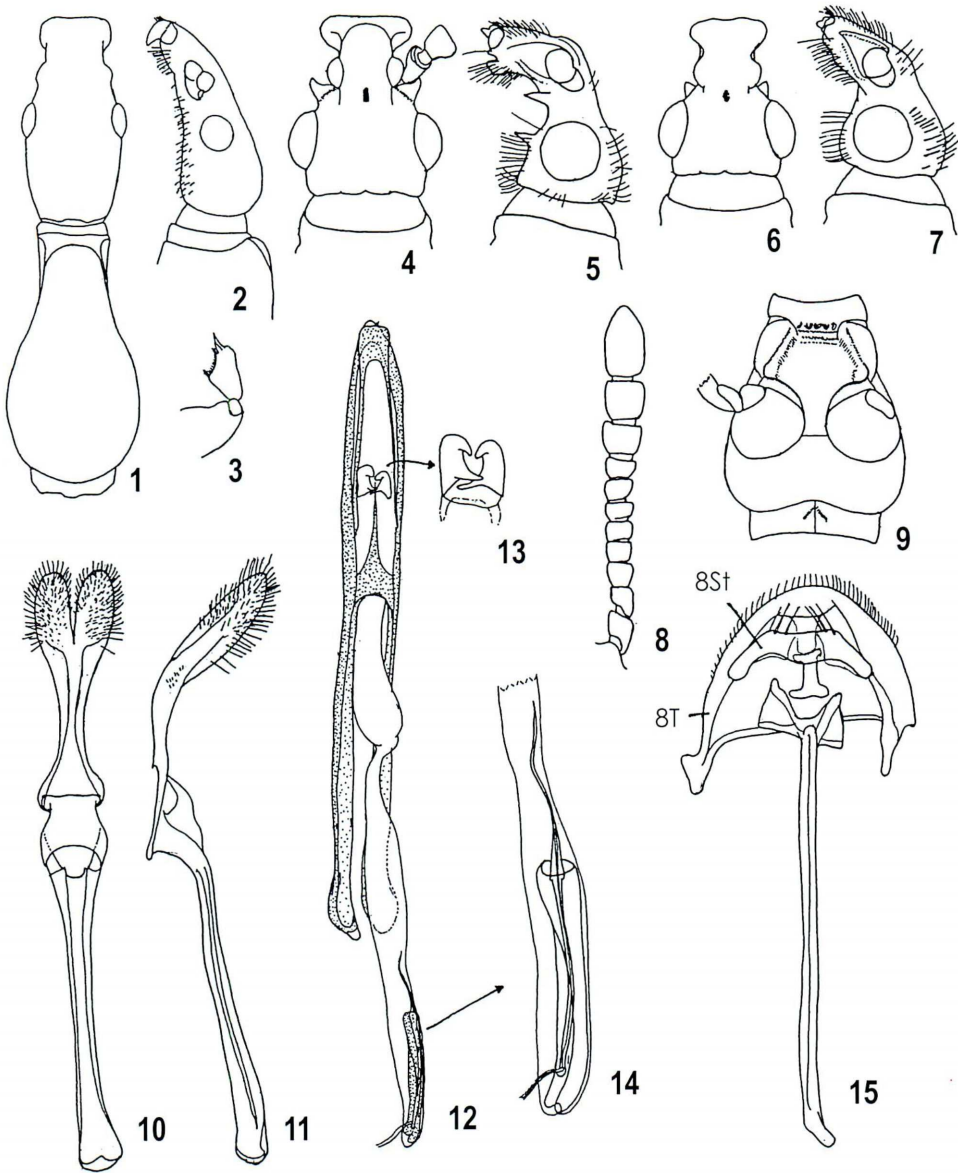
*Thrasyccephalus latecostatus*: DAMOISEAU, 1964, 399; 1989, 168.

*Mesoderes latecostatus*: SFORZI & BARTOLOZZI, 2004, 380.

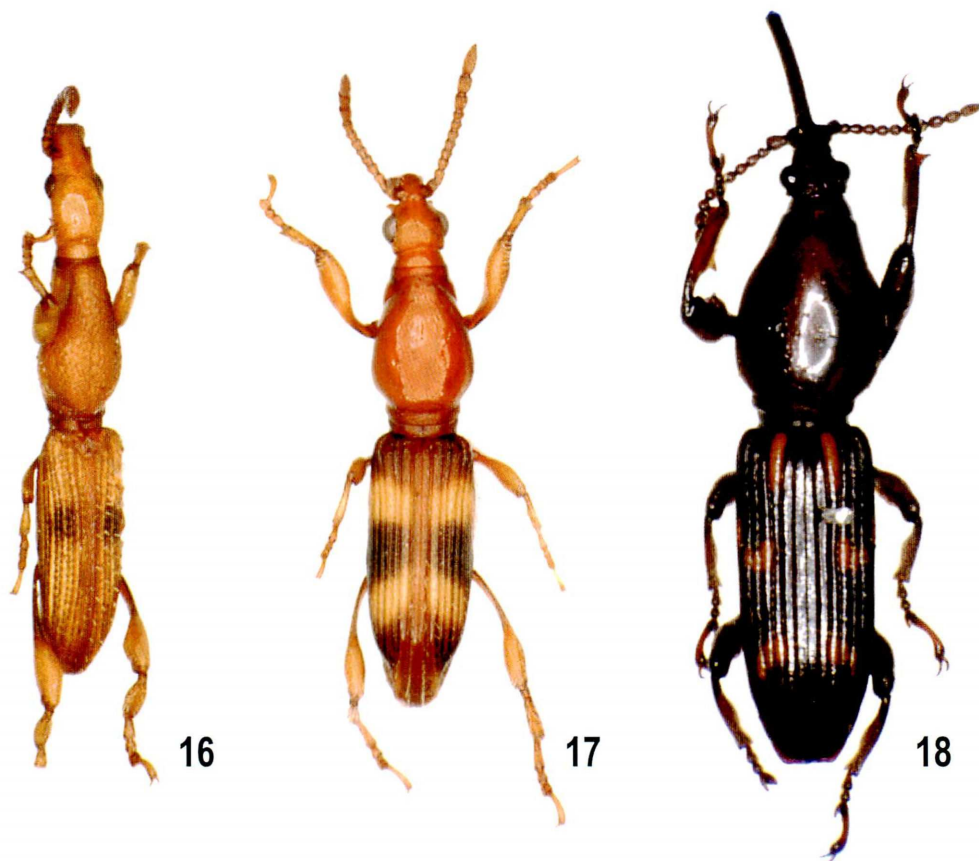
This species has been only known by a female (holotype), and thus redescription is given here on both sexes.

Reddish brown, rarely pronotum with anterior and basal areas entirely brownish, elytra with three blackish bands, basal band often paler, lying on entire width between side margins, median band broader than the basal one, posterior band on declivity, often indefinite at its posterior margin, median and posterior bands usually connate longitudinally by blackish stripe at side on 7th–9th intervals, in most darker specimen blackish part so enlarged on 1st interval, side and apex on each elytron as to leave two reddish brown patches before and after median band. Body shiny, sparsely with fine punctures and fine yellowish grey setae.

*Male.* Head weakly convex, smooth, sparse fine punctures a little denser laterally and behind eyes, each puncture with an erect fine seta, temple behind eye half as long as eye, sharply constricted behind temple, postocciput unpunctured. Rostrum continuous from head in a weak incurve, straight thence to middle until antennal socket, and steeply declivitous to apex in dorsal contour when viewed laterally, prorostrum flat, strongly expanded laterally towards apex, with sparse fine setae, which become a little denser apically. Head and rostrum broadly hollowed ventrally, each side of hollow with a weak basal tubercle at constriction, two sharp and conspicuous teeth, one below eye and the other between eye and antennal socket, the latter tooth larger and weakly curved, and further with an obtuse process at each anterolateral corner, these teeth and process clearly visible when viewed laterally, but weaker in smaller males. Antennae robust, with proportions in length (width) from base as 7.0 (6.0) : 7.0 (5.2) : 4.9 (5.2) :



Figs. 1-15. — 1-3. *Cyphagogus boninensis* sp. nov. ♀: 1, 2, head, dorsal and lateral; 3, fore tibia. 4-15. *Mesoderes latecostatus* (KLEINE): 4, 5, head ♂, dorsal and lateral; 6, 7, head ♀, dorsal and lateral; 8, antenna ♂; 9, prosternum ♂; 10-15, male genitalia: 10, 11, tegmen, dorsal and lateral; 12, aedeagus, dorsal; 13, sclerites of internal sac, enlarged; 14, flagellum and sclerite at gonopore, enlarged; 15, terminalia, ventral.



Figs. 16–18. Photographs of: 16, *Cyphagogus boninensis* sp. nov., holotype, ♀; 17, *Mesoderes latecostatus* (KLEINE), ♂; 18, *Prophthalmus wichmanni* KLEINE, ♀.

3.5 (5.2):3.5 (5.6):3.5 (5.6):4.0 (5.8):3.5 (6.0):6.1 (7.0):7.0 (8.1):18.0 (8.0), 8th segment shortest, 9th to 11th segments forming loose club, 11th segment more than twice as long as wide.

Pronotum 1.5 times as long as wide, widest at basal third, weakly convex dorsally, very sparsely with fine setiferous punctures, with extremely fine median sulcus on dorsum, with an indefinite shallow flattened small area in the middle behind subapical constriction.

Elytra almost parallel-sided in basal two-thirds and evenly rounded to apex, 2.5 times as long as wide, as wide as pronotum, 1st interval straight, flat, 2nd interval narrow, only present on declivity, 3rd and 4th intervals wide at bases, narrowed in the middle, curved, 5th and 6th parallel-sided, 7th to 9th a little wider, each interval with a row of punctures and suberect setae.

Prosternum (Fig. 9) broadly flattened or faintly depressed between ridges, which originate from margin of prosternal process, divergent anteriorly in a curve to front of the middle of procoxal margin, then strongly bent in a weakly prominent angle and convergent anteriorly along notosternal suture as far as subapical constriction on each side, this area between ridges smooth, almost impunctate. Metepisternum impunctate. Metasternum with scattered small punctures. Abdomen with very sparse fine punctures bearing a microscopic seta each, longitudinally depressed in the middle from base to middle of 2nd ventrite, 1st suture broadly interrupted by the depression.

Terminalia and aedeagus in male (Figs. 10–15):— Eighth sternite crescent with truncate apical margin, with a reverse T-shaped spiculum relictum, 9th sternite present as a pair of sclerites firmly attached to the inside of 8th sternite, spiculum gastrale straight, shortly bent only at apex; eighth tergite with a tongue-shaped prominence from caudal margin. Aedeagus slender, pedon (ventral plate) almost parallel-sided from base to apical third, then evenly curved and narrowing apically at sides and rounded triangularly at apex, tectum (dorsal plate) slightly narrowing from base close to truncate apex, with narrow sclerotized side margins, transverse bridge at base and attenuate median slender process sclerotized, internal sac with a pair of sclerites in the middle of aedeagal body, flagellum slender, with trough-like cylindrical sclerite at gonopore.

Female. Head (Figs. 6, 7) with a sharp tooth directing anteriorly on each side in front of ventro-anterior corner of eye, no angulation in ventral outline below eye in lateral aspect; rostrum oblique and straight from mesorostrum to apex on dorsal surface, slightly produced in the middle of prorostrum in lateral aspect, not angulate. Venter not depressed.

Body length: 4.1–5.5 mm.

*Specimens examined.* Fa Kuo Shan (Alt. 800 m), near Liu Kuei, S. Taiwan, 1 ♀, 8–IX–1986, K. BABA. Sugiyamadani, Mt. Inadake, Sata-machi, Kagoshima Pref., 4 ♂, 4 ♀, 17–18–VII–2004, K. HOSOKAWA; 1 ♂, 1 ♀, 18–VII–2004, R. NODA; 4 ♀, 4–6–VIII–2004, R. NODA; 3 ♀, 19–VII–2004, H. HASEGAWA.

*Distribution.* Taiwan, Japan (Kagoshima Pref.)—new record.

*Notes.* When tested in the key to genera of Calodrominae by DAMOISEAU (1989), this species goes down to *Thrasycephalus*, but this genus was synonymized with *Mesoderes* by ZIMMERMAN (1994). The profile of male head is close to that of *M. guttatus* (ref. DAMOISEAU, 1967, p. 11, fig. 22; ZIMMERMAN, 1994, pp. 150 & 157, figs. 168 & 169; SFORZI & BARTOLOZZI, 2004, p. 35, fig. 15) and *Isomorphus amabilis* (= *Mesoderes sexnotatus*) (ref. KLEINE, 1916, p. 53, fig. 22) in having the similar curvature of rostrum and dentation on the underside of head, and the female head is similar to that of *M. sphaeroides* (ref. DAMOISEAU, 1967, p. 13, fig. 25) in having almost straight underside below eye and anteriorly directing tooth when viewed laterally.

Among the species having three blackish bands on elytra (*M. sexnotatus*, *M. guttatus* and *M. maculatus*), this species is separable from *M. maculatus* by the inconspicuously punctate frons (densely punctate in *M. maculatus*), from *M. sexnotatus* by the

distant eyes from constriction (very close in *M. sexnotatus*). This is also distinguished from the other congeners in having the reddish brown general coloration with three blackish bands on elytra and widest pronotum at a third from base.

***Prophthalmus wichmanni* KLEINE, 1916**

(Fig. 18)

*Prophthalmus Wichmanni* KLEINE, 1916, 263, figs. 7, 11, 22, 30, 41 (Tonkin: Than-Mai); 1927, 36 (Tonkin); 1938, 67. — CALABRESI, 1921, 6 (Laos).

*Prophthalmus wichmanni*: KANO, 1930, 153 (Formosa). — KLEINE, 1938, 91 (Sikkim, Assam, Cochin, Formosa). — MIWA & CHŪJŌ, 1939, 5 (Formosa, Tonkin, Laos, India). — HUA, 2002, 297 (China: Taiwan; Vietnam). — SFORZI & BARTOLOZZI, 2004, 252 (S. China, Taiwan, India [Assam, Dajee-ling], Laos, Vietnam).

*Specimen examined.* Yonehara, Ishigakijima Is., 1 ♀, 7-V-1975, T. TAKAHASHI.

*Distribution.* India (Assam, Darjeeling), Laos, Vietnam, S. China, Taiwan, Japan (Ishigakijima Is.)—new record.

要 約

森本 桂・小島弘昭：日本のミツギリゾウムシ相へ3種の追加。——日本産ミツギリゾウムシ科既知の27種に下記の3種を追加した。*Cyphagogus boninensis* sp. nov. オガサワラホソミツギリゾウムシ（和名新称）は小笠原母島産の1♀で記載したもので、同属の種からは黄褐色の地に1対の黒紋をもち、頭部が細長い特徴で区別できる。*Mesoderes latecostatus* (KLEINE, 1916) クロオビホソミツギリゾウムシ（和名改称）は台湾産の1♀で記載されたもので、鹿児島県稲尾岳杉山谷で採集された5♂, 9♀と台湾産の1♀に基づいて再記載を行った。*Prophthalmus wichmanni* KLEINE, 1916 フトミツギリゾウムシ（和名改称）はインドから台湾にかけて分布するが、今回石垣島米原産の1♀を記録した。雄は日本から未知であるが、原記載の図によれば、頭部は後頭部から吻端まで太くて長く、複眼は小さい。

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